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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/660,394	09/12/2000	Tsunemori Yoshida		6909

7590 11/08/2002
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EXAMINER

WEINER, LAURA S

ART UNIT	PAPER NUMBER
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1745

DATE MAILED: 11/08/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/660,394	YOSHIDA, TSUNEMORI	
	Examiner	Art Unit	
	Laura S Weiner	1745	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 31 October 2002.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-5 and 8-15 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-5, 8-15 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
 If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 a) ☐ All b) ☐ Some * c) ☐ None of:
 1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
 * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
 a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s). _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ | 6) <input type="checkbox"/> Other: |

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DETAILED ACTION

Continued Application

1. The request filed on 10-31-02 for a RCE based on parent Application No. 09/660,394 is acceptable and a RCE has been established. An action on the RCE follows.

Response to Amendment

2. Examiner acknowledges the cancellation of claims 6-7 cited in Amendment A dated 6-3-2002. Claims 1-5, 8-15 have been examined on their merits.

Response to Arguments



3. Applicant's arguments filed 10-31-02 have been fully considered but they are not persuasive. .

The rejection of claims 1-2, 5, 8-9, 11-15 remain rejected under 35 U.S.C. 102(e) as being anticipated by Braun et al. (6,180,275) because Braun et al. teaches a composition containing 45-95 wt% graphite powder [85-97 wt%], 5-50 wt% polymer resin [3-15 wt%] and 0-20 wt% metallic fiber, carbon fiber and/or carbon nanofiber and teaches that the graphite powder has an average particle size of 23-26 um [15-125 um]. Braun et al. also teaches that the composition is formed into a composite having a desired geometry by compression molding, injection molding or

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a combination. In the case of compression molding, the graphite and polymer powders are blended together and compressed using a pressure of 5-100 (10)⁶ N/m² (5-100 MPa), and put under a pressure of 1-15 (10)⁶ N/m² (cold-molded, 1-15 MPa) then the pressure was increased to 5-75 (10)⁶ N/m² (molded member pressure, 5-75 MPa). Then the mold is cooled to a temperature in the range of 80-250 degrees C [150-170 degrees C]. Therefore, Braun et al. teaches all the claimed composition and pressure limitations and method steps.

Claim Rejections - 35 USC § 112

4. Claims 1-5, 8-15 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.  

Claim 1 is rejected because it is still unclear what is meant by “bonding graphite powder and a thermosetting resin”. It is unclear what the graphite powder is bonded to. This is not explained in the body of the claim. Also, “Mpa” should instead be “MPa” in both occurrences.

Claim 2 is rejected because there is no antecedent basis for “wherein the composition ratio”. Claim 1 claims a “composite ratio”.

Claim 8 is rejected because it is unclear what is meant by “in which composition the ratios are set”. In addition, it is unclear what composition ratios are wanted. In claim 8, the ranges are presented as 85-97 wt% of graphite powder and 3-15 wt% of a thermosetting resin but in claim 1,

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the ranges are presented as ratios as in the phrase “the composition ratio of said graphite powder is set to 85-97 wt% and a composition ratio of said thermosetting resin is set to 3-15 wt% of said complex. Also, “Mpa” should instead be “MPa” in both occurrences.

Claim 9 is rejected because there is no antecedent basis for “wherein the composition ratio”.

Claim 14-15 is rejected because it is unclear what is meant by “wherein dimensions ...before molding and in a direction of the molding pressure are set”.

Claim Rejections - 35 USC § 102

5. Claims 1-2, 5, 8-9, 11-15 are rejected under 35 U.S.C. 102(e) as being anticipated by Braun et al. (6,180,275).

Braun et al. teaches in column 5, lines 43-49, a composition containing 45-95 wt% graphite powder [85-97 wt%], 5-50 wt% polymer resin [3-15 wt%] and 0-20 wt% metallic fiber, carbon fiber and/or carbon nanofiber. Braun et al. teaches in column 4, lines 66-67, that the graphite powder has an average particle size of 23-26 μm [15-125 μm]. Braun et al. teaches in column 5, line 50 to column 6, line 4, that the composition is formed into a composite having a desired geometry by compression molding, injection molding or a combination. In the case of compression molding, the graphite and polymer powders are blended together and compressed using a pressure of 5-100 (10)⁶ N/m², and put under a pressure of 1-15 (10)⁶ N/m² (1-15

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MPa)[claim: cold-molded 2-10 MPa] then the pressure was increased to 5-75 (10)⁶ N/m² (5-75 MPa)[claim: molded at a pressure of 10-100 MPa]. Then the mold is cooled to a temperature in the range of 80-250 degrees C [150-170 degrees C]. Braun et al. teaches in column 2, lines 65-67, that the polymer can be phenolic, a polyester, etc.

Claim Rejections - 35 USC § 103

6. Claims 1-2, 5 are rejected under 35 U.S.C. 102(e) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Braun et al. (6,180,275).

Braun et al. teaches in column 5, lines 43-49, a composition containing 45-95 wt% graphite powder [85-97 wt%], 5-50 wt% polymer resin [3-15 wt%] and 0-20 wt% metallic fiber, carbon fiber and/or carbon nanofiber. Braun et al. teaches in column 4, lines 66-67, that the graphite powder has an average particle size of 23-26 um [15-125 um]. Braun et al. teaches in column 5, line 50 to column 6, line 4, that the composition is formed into a composite having a desired geometry by compression molding, injection molding or a combination. In the case of compression molding, the graphite and polymer powders are blended together and compressed using a pressure of 5-100 (10)⁶ N/m² (5-100 MPa), and put under a pressure of 1-15 (10)⁶ N/m² (cold-molded, 1-15 MPa) then the pressure was increased to 5-75 (10)⁶ N/m² (molded member pressure, 5-75 MPa). Then the mold is cooled to a temperature in the range of 80-250 degrees C

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[150-170 degrees C]. Braun et al. teaches in column 2, lines 65-67, that the polymer can be phenolic, a polyester, etc.

In the event any differences can be shown for the product of the product by process claims 1-2 and 5, as opposed to the product taught by Braun et al., such differences would have been obvious to one of ordinary skill in the art as a routine modification of the product in the absence of a showing of unexpected results. *In re Thrope* 227 USPQ 964; (Fed. Cir. 1985).

With respect to the product by process claims 1-2 and 5, the determination of patentability is based upon the product itself not upon the method of its production. *In re Thrope* 227 USPQ 964; *In re Brown* 173 USPQ 685; *In re Bridgeford* 149 USPQ 55; *In re Wertheim* 191 USPQ 90. Any difference imparted by the product by process limitations would have been obvious to one having ordinary skill in the art at the time the invention was made because where the Examiner has found a substantially similar product as in the applied prior art, the burden of proof is shifted to the Applicants to establish that their product is patentably distinct. *In re Brown* 173 USPQ 685 and *In re Fessmann* 180 USPQ 324.

7. Claims 3-4, 10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Braun et al. (6,180,275) in view of Uemura et al. (4,737,421).

Braun et al. teaches a composition containing 45-95 wt% graphite powder [60-90 wt%], 5-50 wt% polymer resin [10-40 wt%] and 0-20 wt% metallic fiber, carbon fiber and/or carbon

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nanofiber. Braun et al. teaches in column 4, lines 66-67, that the graphite powder has an average particle size of 23-26 um [15-125 um]. Braun et al. teaches in column 2, lines 65-67, that the polymer can be phenolic, a polyester, etc.

Braun et al. teaches the claimed invention expect does not teach that the graphite powder had a average particle diameter of 40-100 um.

Uemura et al. teaches in column 7, lines 31-60, Examples 4 and 5, a fuel cell separator comprising a separator comprising fibrous cellulose, graphite powder, 44 um or less and a phenol resin.

It would have been obvious to one having ordinary skill in the art at the time the invention was made to use a graphite powder with a diameter of 44 um or less because Uemura et al. teaches this is known in a separator composition comprising a phenol resin and since it has been held that where general conditions of a claim are disclosed in the prior art, discovering the optimum or workable ranges involves only routine skill in the art. *In re Aller*, 105 USPQ 233.

Double Patenting

8. Claims 1, 3-5, 8, 10-11 are provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 7-8 of copending Application No. 09/660,291. Although the conflicting claims are not identical, they are not patentably distinct from each other because the copending application 09/660,291 claims the same

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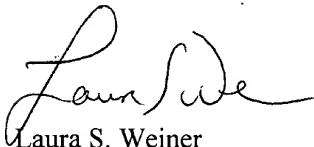
fuel cell separator having overlapping composition ratios having a graphite powder with an average diameter of 15-125 um, cold-molding at a pressure of 2-20 MPa and then molding with a pressure of 10-100 MPa.

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Laura Weiner whose telephone number is (703) 308-4396. The examiner works a flexible schedule.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Patrick Ryan, can be reached at (703) 308-2383. The fax phone number for non-after finals is 703-872-9310 and the fax phone number for after-finals is 703-872-9311.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0661.



Laura S. Weiner
Primary Examiner
Art Unit 1745
November 7, 2002